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| 10/799,932 | 03/12/2004 | Bruce Schoenberger | 76711.00101 | 6831 |
| 34661 | 7590 | 04/04/2006 | EXAMINER | |
| CHARLES N. QUINN FOX ROTHSCHILD LLP 2000 MARKET STREET, 10TH FLOOR PHILADELPHIA, PA 19103 | | | WALK, SAMUEL J | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2612 | |

DATE MAILED: 04/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/799,932

Applicant(s)

SCHOENBERGER ET AL.

Examiner

Samuel J. Walk

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-114 is/are pending in the application.
- 4a) Of the above claim(s) 1-71 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 114 is/are allowed.
- 6) ☒ Claim(s) 72-113 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>06/16/2004</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicants' election with traverse of the invention of Group VI, claims 72-114 in the reply filed on February 8, 2006 is acknowledged. The traversal is on the grounds that the Examiner has taken an overly restrictive, unduly limited view of the claims and has overlooked the broad, overall function and purpose of the invention.

This is not found persuasive because Applicants' response amounts to a request for reconsideration and is not a proper response to the restriction requirement.

The Examiner's requirement for restriction clearly sets forth six inventions and clearly explains why the inventions are patentably distinct. The claims are grouped as subcombinations usable together. The restriction requirement clearly explains how each of the inventions has separate utility by itself.

Applicants' response has not pointed out any supposed errors in the requirement. Applicants have not explained how any of the separate inventions are not patentably distinct. While it is appreciated that the components of Applicants' invention are part of a larger overall system, the claims are written and grouped as a plurality of separate inventions.

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The requirement is still deemed proper and is therefore made FINAL.

2. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

3. Claims 1-71 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to nonelected inventions, there being no allowable generic or linking claim.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 72-102 and 105-112 are rejected under 35 U.S.C. 102(e) as being anticipated by Hardman (US 2002/0075145).

Regarding Claims 72-73, 83 and 89, Hardman discloses an electronic tire management system wherein a pressure sensor 74

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with power source 94, such as a battery, monitors the pressure of a tire. Upon an alarm condition, i.e. low pressure, tag 14 transmits an alarm signal (first output signal) to reader/transceiver RT 30 which then transmits such an alarm condition (second output signal) through a satellite link which then relays (third output signal) it to a remote server 50, see para. [0123, 0124 and 0140]. Hardman further discloses tag 14 determines if an alarm condition exists (comparison), i.e. the sensor data values are outside of a stored threshold, see para. [0155].

Regarding Claim 74, Hardman also discloses that if a tire parameter is outside a predetermined threshold, above or below, the tag 14 will transmit an alarm signal during an awake mode. Therefore, it is inherent that the pressure sensor is continuously detecting.

Regarding Claim 75, Hardman further discloses the pressure sensor 74 produces an analog signal supplied to microcontroller 84 which performs A/D conversion on the data for subsequent processing and storage, see para. [0123]. An analog signal constitutes an electrical output signal. In addition, an analog signal contains a voltage signature.

Regarding Claims 76 and 81, see above rejection in reference to Claim 75. In addition, it is inherent that the

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signals being transmitted from the RT 30 and through the satellite link to remote server 50 would remain digital signals and thus constitute electrical output signals. In addition, like analog signals, digital signals contain a voltage signature.

Regarding Claim 77, see above rejection in reference to Claims 72-73. In addition, Hardman disclose the alarm signal constitutes an out of range condition for temperature and pressure and thus "out of range" includes above and below conditions, see para. [0141].

Regarding Claim 78, see above rejections in reference to Claims 76 and 74.

Regarding Claim 79, see above rejection in reference to Claims 77 and 75.

Regarding Claim 80, see above rejection in reference to Claims 78 and 74-75.

Regarding Claim 82, Hardman further disclose the information gathered by the RT 30 can be sent to a database by a communication channel such as an optical link, see para. [0136].

Regarding Claims 84-87, see above rejections in reference to Claims 82 and 74, 75, 80 and 76, respectively.

Regarding Claim 88, see above rejection in reference to Claims 86 and 74-75.

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Regarding Claims 90-91, see above rejection in reference to Claims 89 and 74-75.

Regarding Claim 92, see above rejection in reference to Claims 90 and 80.

Regarding Claims 93 and 95, see above rejection in reference to Claims 88 plus 76 and 81, respectively .

Regarding Claim 94, see above rejection in reference to Claims 92 and 88.

Regarding Claim 96, see above rejection in reference to Claims 94 and 74-75.

Regarding Claims 97-98, see above rejection in reference to Claims 95 plus 74-75, respectively.

Regarding Claim 99, see above rejection in reference to Claims 88 and 75.

Regarding Claim 100, see above rejection in reference to Claims 88 and 82. In addition, according to The American Heritage College dictionary, 4th Edition, "optical" is defined as (4th definition): Relating to or using visible light. Thus, it is inherent that Hardman's optical link, as cited in the rejection of Claim 82, would have included the visual range.

Regarding Claims 101-102, see above rejection in reference to Claim 72. In addition, Hardman discloses vehicle 12 is shown

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with two tires 10A and 10B each having respective tire tags 14A and 14B, see para. [0106].

Regarding Claim 105, see above rejection in reference to Claim 102, specifically, the determination of an alarm condition (comparison) as described in the rejection of Claim 72.

Regarding Claim 106, Hardman further discloses the determination of an alarm condition (comparison) is performed within tags 14 and tags 14 are mounted on the respective tires.

Regarding Claim 107, Hardman further discloses the communication channel may include an RS-232 serial link, see para. [0108].

Regarding Claim 108, see above rejection in reference to Claims 101-102 and 76.

Regarding Claims 109-112, see above rejection in reference to Claims 101-102. In addition, as stated above, Hardman discloses a vehicle shown with two tires (multi-wheel) each having tire tags, see para. [0106].

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 103-104 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hardman in view of Schaeffer (US 5048116).

Regarding Claim 103, see above rejection in reference to Claims 101-102. Hardman discloses the utilization of frequency hopping to minimize interference and to transmit the maximum signal radiation over a single channel, see para. [0114] and Fig. 12. Hardman does not specifically disclose the utilization of a multiplexer in the frequency hopping. However, Schaeffer teaches of a signal routing system wherein signals are transmitted over a single channel also utilizing frequency hopping. Schaeffer also teaches baseband multiplexer 20 is necessary to support such a mode of operation, see Col. 3 lns 33-68. Therefore, one having ordinary skill in the art at the time the invention was made would have incorporated the teachings of Schaeffer into the system of Hardman because multiplexers are necessary in frequency hopping, as stated by Schaeffer.

Regarding Claim 104, see above rejection in reference to Claim 103. In addition, Hardman discloses that tag 14 includes RAM memory 16 that records pressure history, see para. [0150].

8. Claim 113 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hardman.

Regarding Claim 113, see above rejections in reference to Claim 72. In addition, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the self-powered encapsulated tags of Hardman as integrated solid state monolithic chips because they are readily available and functionally equivalent apparatuses in that the circuitry is designed according to the user's or manufacturer's specifications of whether to utilize solid state devices in the circuitry and whether to utilize only one chip or multiple chips within the encapsulation.

Allowable Subject Matter

9. Claim 114 is allowed.

10. The following is a statement of reasons for the indication of allowable subject matter: Claim 114 has been found to be novel and inventive because prior art fails to show monitoring tire pressure wherein an aerodynamic wheel cover assembly

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comprises a substantially elliptically-shaped dome, an exhaust port positioned at an apex of the dome, a bridge of the port, a mechanical pressure gauge, an intake valve, a valve stem, a valve assembly and a gauge wherein the stem, hose, gauge and valve are in communication such that when the hose is in communication with a fill-valve of the tire, the gauge displays pressure and the tire can be inflated or deflated via the stem, a wheel clip assembly base portion, a wheel clip assembly bracket portion, a spring clip and a Dzus fastener.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Breed (US 6738697) discloses a telematics system for vehicle diagnostics. Schick (US 2002/0059075) discloses a method and system for managing a land-based vehicle. Marcarelli (US 2002/0070881) discloses a user tracking application. Fennel (US 6535803) discloses a supply of data to motor vehicles.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Samuel J. Walk whose telephone number is (571) 272-2960. The examiner can normally be reached on M-F: 8:00-5:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Hofsass can be reached on (571) 272-2981. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SJW



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